



April 8, 2013

PENTAIR RESIDENTIAL FILTRATION LLC
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MILWAUKEE WI 53209

GENERAL ELECTRIC
APPLIANCES
JIM WHITE
AP2-120 APPLIANCE PARK
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Re: Description: WATER TREATMENT DEVICE - ACTIVATED CARBON
Manufacturer: GENERAL ELECTRIC
Product Name: GENERAL ELECTRIC
Model Number(s): GX1SO1R USING THE FXUVC CARTRIDGE
Product File No: 20130059

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters SPS 382 through 384, Wisconsin Administrative Code, and Chapters 145 and 160, Wisconsin Statutes.

The Department hereby issues an approval based on the Wisconsin Statutes and the Wisconsin Administrative Code. This approval is valid until the end of April 2018.

This approval is contingent upon compliance with the following stipulation(s):

- This product has undergone sufficient testing to document the product's ability to reduce only those contaminants and/or substances as specified in this approval letter when the product is installed and maintained in strict accordance with the manufacturer's published instructions.
- Where the Department of Natural Resources (DNR) has jurisdiction, a written approval may be required prior to installation of this product in a water supply system to reduce the concentration of a contaminant that exceeds the primary drinking water standards contained in ch. NR 809, Wis. Admin. Code, the enforcement standards contained in ch. NR 140, Wis. Admin. Code, or for a water supply system that is subject to a written advisory opinion by the DNR. For more information contact the DNR Section of Private Water Systems, P.O. Box 7921, Madison, WI 53707, telephone (608) 267-9787.
- If this approved device is modified or additional assertions of function or performance are made, then this approval shall be considered null and void, unless the change is submitted to the department for review and the approval is reaffirmed.
- If the treatment components of this device (e.g., replacement cartridge) are replaced with anything other than those originally approved for use with this device, then this approval shall immediately be considered null and void.
- These devices will only reduce the concentration of volatile organic chemicals at water outlets that are served by the devices. There are dermal (skin) absorption and inhalation exposure risks associated with volatile organic chemicals. Therefore, using point-of-use devices such as these will not protect all routes of potential exposure. Potentially hazardous exposures to volatile organic chemicals will remain possible at unprotected outlets, particularly hot water outlets (e.g. bathing, showering, clothes washing or dish washing).

If, by way of reputable water analyses, a water supply is known to contain unsafe levels of volatile organic chemicals, then all the water entering the residence must be treated at the point-of-entry using an approved water treatment device to address all potential routes of exposure.

- These devices will only reduce the concentration of cysts/oocysts at water outlets that are served by the devices. Therefore, using point-of-use devices such as these will not protect all routes of potential exposure. Potentially hazardous exposures to cysts/oocysts will remain possible at unprotected outlets.

The presence of cysts/oocysts strongly suggests that other pathogens (e.g. bacteria, virus) may also be present.

If, by way of reputable water analyses, a water supply is known to contain cysts/oocysts, then all the water entering the residence must be treated at the point-of-entry, using an approved water treatment device, to address all potential routes of exposure thereby providing a biologically safe water supply.

Based on testing data submitted to and reviewed by the department, this approval recognizes that this plumbing product will reduce the concentration of contaminants as specified on pages 1 through 4 of this letter.

HEALTH EFFECTING INORGANIC CONTAMINANT REDUCTION CAPABILITIES
PRODUCT FILE NUMBER 20130059
TABLE 1 OF 4

Flow Rate: 1.9 liters per minute (lpm) [0.5 gallons per minute (gpm)]

Capacity: 1,893 liters (l) [500 gallons (gals.)]

| Tested Contaminant | Tested Influent Concentration (mg/l) ¹ |
|-------------------------------------|--|
| Asbestos Fibers (> 10 µm in length) | 1.0 x 10 ⁷ to 1.0 x 10 ⁸ F/l |
| Lead (Pb ⁺²) | 0.15 ± 10% |
| Mercury (Hg ⁺²) | 0.006 ± 10% |

Other conditions: the contaminant reduction capabilities displayed for table 1 of 4 were generated by testing conducted in accordance with NSF/ANSI Standard 53. To qualify for asbestos reduction, the device must reduce the influent challenge concentrations by ≥ 99%. To qualify for lead reduction, the device must reduce the influent challenge concentrations such that all effluent concentrations are ≤ 0.010 mg/l. To qualify for mercury reduction, the device must reduce the influent challenge concentrations such that all effluent concentrations are ≤ 0.002 mg/l.

¹ = milligrams per liter (mg/l) are equivalent to parts per million (ppm)

≤ = less than or equal to

F/l = fibers per liter

µm = micrometers

± = plus or minus

* = unless otherwise indicated

> = greater than

≥ = greater than or equal to

HEALTH EFFECTING BIOLOGICAL CONTAMINANT REDUCTION CAPABILITIES
PRODUCT FILE NUMBER 20130059
TABLE 2 OF 4

Flow Rate: 1.9 liters per minute (lpm) [0.5 gallons per minute (gpm)]

Capacity: dependant on the type and quantity of particulate matter present, the need for serviced may be indicated by a significant decrease in flow rate.

| Tested Contaminant | Influent Challenge (#/ml) |
|----------------------------|---------------------------|
| Cysts/Oocysts ¹ | ≥ 5.0 x 10 ⁴ |

Other Conditions: the contaminant reduction performance capabilities displayed for Table 2 of 4 were verified by testing conducted in accordance with NSF *International* Standard 53. To qualify for cyst/oocyst reduction, the device must reduce the influent challenge concentrations by ≥ 99.95% at each sample point.

¹ = the specific organisms covered under this testing protocol include cryptosporidium parvum, entamoeba histolytica, giardia lamblia and toxoplasma gondii

≥ = greater than or equal to

#/ml = particles per milliliter

AESTHETIC INORGANIC CONTAMINANT REDUCTION CAPABILITIES
PRODUCT FILE NUMBER 20130059
TABLE 3 OF 4

Flow Rate: 1.9 liters per minute (lpm) [0.5 gallons per minute (gpm)]

Capacity: 1,893 liters (l) [500 gallons (gals.)] for free chlorine reduction. For particulate reduction, the capacity is dependant on the type and quantity of particulate matter present, the need for service may be indicated by a significant decrease in flow rate.

| Tested Contaminant | Average Influent Challenge (mg/l) ¹ |
|--------------------------------|--|
| Chlorine (free) | 2.0 ± 10% |
| Particulates (0.5 to < 1.0 µm) | ≥ 1.0 x 10 ⁴ #/ml |

Other Conditions: the contaminant reduction performance capabilities displayed for Table 3 of 4 were verified by testing conducted in accordance with NSF *International* Standard 42. To qualify for free chlorine reduction, the device must reduce the influent challenge concentrations by ≥ 50%; meeting the free chlorine reduction requirements also qualifies the device for the reduction of aesthetic, organic, taste and odor reduction (e.g. geosmin, methylisoborneol); this does not include hydrogen sulfide. To qualify for particulate reduction (Class I) the device must reduce the influent challenge concentrations by ≥ 85%.

1 = milligrams per liter (mg/l) are equivalent to parts per million (ppm)

≥ = greater than or equal to

± = plus or minus

HEALTH EFFECTING ORGANIC CONTAMINANT REDUCTION CAPABILITIES
PRODUCT FILE NUMBER 20130059
TABLE 4 OF 4

Flow Rate: 1.9 liters per minute (lpm) [0.5 gallons per minute (gpm)]

Capacity: 1,893 liters (l) [500 gallons (gals.)]

| Tested Contaminant | Influent Challenge (µg/l) ¹ |
|---------------------------------|--|
| Alachlor | 50 |
| Atrazine | 100 |
| Benzene | 81 |
| Carbofuran | 190 |
| Carbon tetrachloride | 78 |
| Chlorobenzene | 77 |
| Chloropicrin | 15 |
| 2,4-D | 110 |
| Dibromochloropropane (DBCP) | 52 |
| o-Dichlorobenzene | 80 |
| p-Dichlorobenzene | 40 |
| 1,2-Dichloroethane | 88 |
| 1,1-Dichloroethylene | 83 |
| cis-1,2-Dichloroethylene | 170 |
| trans-1,2-Dichloroethylene | 86 |
| 1,2-Dichloropropane | 80 |
| cis-1,3-Dichloropropylene | 79 |
| Dinoseb | 170 |
| Endrin | 53 |
| Ethylbenzene | 88 |
| Ethylene dibromide (EDB) | 44 |
| Haloacetonitriles (HAN): | - |
| Bromochloroacetonitrile | 22 |
| Dibromoacetonitrile | 24 |
| Dichloroacetonitrile | 9.6 |

| Tested Contaminant | Influent Challenge (µg/l) ¹ |
|---|--|
| Trichloroacetonitrile | 15 |
| Haloketones (HK): | - |
| 1,1-Dichloro-2-propanone | 7.2 |
| 1,1,1-Trichloro-2-propanone | 8.2 |
| Heptachlor (H-34, HEPTOX) | 80 |
| Heptachlor epoxide | 10.7 |
| Hexachlorobutadiene | 44 |
| Hexachlorocyclopentadiene | 60 |
| Lindane | 55 |
| Methoxychlor | 50 |
| Methyl <i>tert</i> -butyl ether [▲] | 15.0 ± 20% |
| Pentachlorophenol | 96 |
| Simazine | 120 |
| Styrene | 150 |
| 1,1,2,2-Tetrachloroethane | 81 |
| Tetrachloroethylene | 81 |
| Toluene | 78 |
| 2,4,5-TP (silvex) | 270 |
| Tribromoacetic acid | 42 |
| 1,2,4-Trichlorobenzene | 160 |
| 1,1,1-Trichloroethane | 84 |
| 1,1,2-Trichloroethane | 150 |
| Trichloroethylene | 180 |
| Trihalomethanes (chloroform surrogate) | 300 |
| Xylenes (total) | 70 |

Other Conditions: the contaminant reduction performance capabilities displayed for Table 4 of 4 were verified by testing conducted in accordance with NSF *International* Standard 53. To qualify for the reduction of the organic contaminants listed above, the device must reduce the influent challenge concentration of chloroform at 300 µg/l ± 10% at each sample point by a minimum of 95%. To qualify for methyl *tert*-butyl ether, the device must reduce the influent challenge concentrations such that all effluent concentrations are ≤ 5.0 µg/l

▲ = tested independently of the chloroform surrogate, under NSF Standard 53

¹ = micrograms per liter (µg/l) are equivalent to parts per billion (ppb)

≤ = less than or equal to

± = plus or minus

This device was tested under controlled laboratory, or field, conditions. The actual performance of this device for a specific end use installation will vary from the tested conditions based on local factors such as water pressure, water temperature and water chemistry.

The department is in no way endorsing this product or any advertising, and is not responsible for any situation which may result from its use.

Sincerely,

Glen W. Schlueter
Plumbing Product Reviewer
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Division of Industry Services
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